General

Title

Chronic graft versus host disease (cGVHD): percentage of patients with cGVHD who were prescribed pneumococcal prophylaxis.

Source(s)

Proposed chronic graft versus host disease measure set: questionnaire, measures with specifications, glossary. Arlington Heights (IL): American Society for Blood and Marrow Transplantation; 26 p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients with chronic graft versus host disease (cGVHD) who were prescribed pneumococcal prophylaxis.

Rationale

The pathogenesis of chronic graft versus host disease (cGVHD) is poorly understood. Symptoms usually present within 3 years after allogeneic hematopoietic cell transplantation (HCT) and are often preceded by a history of acute GVHD. Manifestations of chronic GVHD may be restricted to a single organ or tissue or may be widespread. Chronic GVHD can lead to debilitating consequences, e.g., joint contractures, loss of sight, end-stage lung disease, or mortality resulting from profound chronic immune suppression leading to recurrent or life-threatening infections.

Support (verbatim) from National Institutes of Health (NIH) Consensus Development Project: Antibiotic prophylaxis against pneumococcal infection is indicated in patients with chronic graft versus host disease

(cGVHD) and those with low immunoglobulin G (IgG) levels. Antibiotic prophylaxis should be administered even to patients who have received pneumococcal vaccine, because not all strains are included in the vaccines, the immunogenicity of vaccines against the vaccine strains in hematopoietic cell transplantation (HCT) patients is only, at most, about 80%, and because of the theoretic concern that strains not included in the vaccine will replace vaccine strains. Oral penicillin remains the preferred choice, but antibiotic selection depends on the local pattern of pneumococcal resistance to penicillin and other antibiotics (i.e., second-generation cephalosporins, macrolides, and quinolones).

Statements (verbatim) on gap: Invasive pneumococcal infection (IPI) is a life threatening complication that may occur months to years after HCT. The annual incidence of IPI is 8.23/1000 transplants among allogeneic HCT recipients, and higher still among those with cGVHD (20.8/1000 transplants). Although IPI occurs less frequently in autologous HCT recipients (annual incidence, 3.8/1000 transplants), the risk remains much higher than in an immunocompetent population.

Evidence for Rationale

Cordonnier C, Labopin MV, et al. Influence of immunisation timing on the response to conjugate-pneumococcal vaccine after allogeneic stem cell transplant: final results of the EBMT IDWP01 Trial. Bone Marrow Transplant. 2008;45

Engelhard D, Cordonnier C, Shaw PJ, Parkalli T, Guenther C, Martino R, Dekker AW, Prentice HG, Gustavsson A, Nurnberger W, Ljungman P, Infectious Disease Working Party of the European Bone Marrow Transplantation. Early and late invasive pneumococcal infection following stem cell transplantation: a European Bone Marrow Transplantation survey. Br J Haematol. 2002 May;117(2):444-50. PubMed

Filipovich AH, Weisdorf D, Pavletic S, Socie G, Wingard JR, Lee SJ, Martin P, Chien J, Przepiorka D, Couriel D, Cowen EW, Dinndorf P, Farrell A, Hartzman R, Henslee-Downey J, Jacobsohn D, McDonald G, Mittleman B, Rizzo JD, Robinson M, Schubert M, Schultz K, Shulman H, Turner M, Vogelsang G, Flowers ME. National Institutes of Health consensus development project on criteria for clinical trials in chronic graft-versus-host disease: I. Diagnosis and staging working group report. Biol Blood Marrow Transplant. 2005 Dec;11(12):945-56. PubMed

Haddad PA, Repka TL, Weisdorf DJ. Penicillin-resistant Streptococcus pneumoniae septic shock and meningitis complicating chronic graft versus host disease: a case report and review of the literature. Am J Med. 2002 Aug 1;113(2):152-5. [34 references] PubMed

Jenkins SG, Brown SD, Farrell DJ. Trends in antibacterial resistance among Streptococcus pneumoniae isolated in the USA: update from PROTEKT US Years 1-4. Ann Clin Microbiol Antimicrob. 2008;7:1. PubMed

Patel SR, Ortin M, Cohen BJ, Borrow R, Irving D, Sheldon J, Heath PT. Revaccination with measles, tetanus, poliovirus, Haemophilus influenzae type B, meningococcus C, and pneumococcus vaccines in children after hematopoietic stem cell transplantation. Clin Infect Dis. 2007 Mar 1;44(5):625-34. PubMed

Perez Retortillo JA, Marco F, Richard C, Conde E, Manjon R, Bureo E, Iriondo A, Zubizarreta A. Pneumococcal pericarditis with cardiac tamponade in a patient with chronic graft-versus-host disease. Bone Marrow Transplant. 1998 Feb;21(3):299-300. PubMed

Proposed chronic graft versus host disease measure set: questionnaire, measures with specifications, glossary. Arlington Heights (IL): American Society for Blood and Marrow Transplantation; 26 p.

Sullivan KM. Graft vs. host disease. In: Blume KG, Forman SJ, Appelbaum FR, editor(s). Thomas' Hematopoietic Cell Transplantation. 3rd ed. Malden (MA): Blackwell Publishing; 2004. p. 635-64.

Tauro S, Dobie D, Richardson G, Hastings M, Mahendra P. Recurrent penicillin-resistant pneumococcal sepsis after matched unrelated donor (MUD) transplantation for refractory T cell lymphoma. Bone Marrow Transplant. 2000 Nov;26(9):1017-9. PubMed

Tomblyn M, Chiller T, Einsele H, Gress R, Sepkowitz K, Storek J, Wingard JR, Young JA, Boeckh MJ, Center for International Blood and Marrow Research, National Marrow Donor program, European Blood and Marrow Transplant Group, American Society of Blood and Marrow Transplantation, Canadian Blood and Marrow Transplant Group, Infectious Diseases Society of America, Society for Healthcare Epidemiology of America, Association of Medical Microbiology and Infectious Disease Canada, Centers for Disease Control and Prevention. Guidelines for preventing infectious complications among hematopoietic cell transplantation recipients: a global perspective. Biol Blood Marrow Transplant. 2009 Oct;15(10):1143-238. PubMed

Primary Health Components

Chronic graft versus host disease (cGVHD); pneumococcal prophylaxis

Denominator Description

The number of patients in your selection diagnosed with chronic graft versus host disease (cGVHD) (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

The number of patients in your selection diagnosed with chronic graft versus host disease (cGVHD) AND were prescribed pneumococcal prophylaxis (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Reported incidence rates of chronic graft versus host disease (cGVHD) after allogeneic transplantation range from 6% to 80% according to recipient age, donor type, hematopoietic cell transplantation (HCT) source (peripheral blood, bone marrow, or umbilical cord blood stem cells), graft manipulation (T-cell depletion), and use of post transplantation donor lymphocyte infusion (DLIs). Reliable incidence estimates in different cohorts of HCT recipients are compromised by (1) lack of standardized, widely used diagnostic guidelines; (2) variability in observer experience; (3) limited expert follow-up at a distance from transplant centers; (4) differences in the statistical methods applied (e.g., use of the Kaplan-Meier versus cumulative incidence estimates and variable requirement for some minimal survival [60-100 days] for patients to be considered at risk of chronic GVHD); and (5) the sometimes protean nature of early chronic GVHD symptoms, which mimic alternative diagnoses.

Evidence for Additional Information Supporting Need for the Measure

Filipovich AH, Weisdorf D, Pavletic S, Socie G, Wingard JR, Lee SJ, Martin P, Chien J, Przepiorka D, Couriel D, Cowen EW, Dinndorf P, Farrell A, Hartzman R, Henslee-Downey J, Jacobsohn D, McDonald G, Mittleman B, Rizzo JD, Robinson M, Schubert M, Schultz K, Shulman H, Turner M, Vogelsang G, Flowers ME. National Institutes of Health consensus development project on criteria for clinical trials in chronic graft-versus-host disease: I. Diagnosis and staging working group report. Biol Blood Marrow Transplant. 2005 Dec;11(12):945-56. PubMed

Remberger M, Aschan J, Lonnqvist B, Carlens S, Gustafsson B, Hentschke P, Klaesson S, Mattsson J, Ljungman P, Ringden O. An ethnic role for chronic, but not acute, graft-versus-host disease after HLA-identical sibling stem cell transplantation. Eur J Haematol. 2001 Jan;66(1):50-6. PubMed

Rocha V, Wagner JE Jr, Sobocinski KA, Klein JP, Zhang MJ, Horowitz MM, Gluckman E. Graft-versus-host disease in children who have received a cord-blood or bone marrow transplant from an HLA-identical sibling. Eurocord and International Bone Marrow Transplant Registry Working Committee on Alternative Donor and Stem Cell Sources. N Engl J Med. 2000 Jun 22;342(25):1846-54. PubMed

Sullivan KM, Agura E, Anasetti C, Appelbaum F, Badger C, Bearman S, Erickson K, Flowers M, Hansen J, Loughran T, et al. Chronic graft-versus-host disease and other late complications of bone marrow transplantation. Semin Hematol. 1991 Jul;28(3):250-9. [75 references] PubMed

Extent of Measure Testing

The Chronic Graft Versus Host Disease (cGVHD) measure set was developed by the American Society for Blood and Marrow Transplantation (ASBMT) using a rigorous methodology (adapted from the American Medical Association's Physician Consortium for Performance Improvement [AMA-PCPI] and including field testing) and adapted for use in Practice Improvement Modules (PIMs) by the American Board of Internal Medicine (ABIM).

Evidence for Extent of Measure Testing

Joseph TL. (Executive Director, American Society for Blood and Marrow Transplantation). Personal communication. 2013 Jan 21. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Hospital Inpatient

Hospital Outpatient

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Clinical Practice or Public Health Sites

Statement of Acceptable Minimum Sample Size

Specified

Target Population Age

All ages

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Making Care Safer
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Safety

Data Collection for the Measure

Case Finding Period

12 months

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
The number of patients in your selection diagnosed with chronic graft versus host disease (cGVHD)

Note: Patients can be included in the chart abstraction if:

> They have been seen by the practice within the past 12 months; and
> Management decisions regarding care are made primarily by providers in the practice.

Select at least 10 of your patients who have had hematopoietic cell transplant (HCT) and cGVHD. Refer to the original measure documentation for administrative codes.

Exclusions
None

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions
The number of patients in your selection diagnosed with chronic graft versus host disease (cGVHD) AND were prescribed pneumococcal prophylaxis

Note: This requires documentation in the patient's medical record that the patient was prescribed pneumococcal prophylaxis.

Exclusions
None

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Patients with chronic GVHD who were prescribed pneumococcal prophylaxis.

Measure Collection Name

Chronic Graft Versus Host Disease Measure Set

Submitter

American Society for Blood and Marrow Transplantation - Professional Association

Developer

American Society for Blood and Marrow Transplantation - Professional Association

Funding Source(s)

American Society for Blood and Marrow Transplantation

Composition of the Group that Developed the Measure

The American Society for Blood and Marrow Transplantation (ASBMT) Education Practice Improvement Modules Task Force:

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Financial Disclosures/Other Potential Conflicts of Interest

Conflicts, if any, are disclosed in accordance with the American Society for Blood and Marrow Transplantation (ASBMT) conflict of interest policy.

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2012 Apr

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in February 2017.

Measure Availability

Source not available electronically.

For more information, contact the American Society for Blood and Marrow Transplantation (ASBMT) at 85 W. Algonquin Road, Suite 550, Arlington Heights, IL 60005; Phone: 847-427-0224; Fax: 847-427-9656; Web site: www.asbmt.org ; E-mail: mail@asbmt.org.

NQMC Status

This NQMC summary was completed by ECRI Institute on September 24, 2013. The information was verified by the measure developer on October 25, 2013.

The information was reaffirmed by the measure developer on February 8, 2017.

Copyright Statement

Production

Source(s)

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